

Last										STUDENT'S NAME										First										MI	SCHOOL NAME					
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SOCIAL SECURITY NUMBER										DISTRICT STUDENT ID NUMBER										ETHNICITY Fill in only one.																
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Alaska

Comprehensive System of Student Assessment



Alaska Department of Education
& Early Development

Benchmark 2
Mathematics Practice Test

TEACHER'S USE ONLY
Fill in all that apply.

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7
- ☐ 8
- ☐ 9

Reading

- ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Writing

- ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Mathematics

- ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5



Mathematics

Sample A

John has 13 red balloons and 10 blue balloons.
How many balloons does he have in all?

- ☐ Ⓐ 13
- ☐ Ⓑ 14
- ☐ Ⓒ 23
- ☐ Ⓓ 24

Sample B

Tina had soup, a sandwich, and juice for lunch. Which of these is closest to the amount of money she spent all together?

- ☐ Ⓐ \$4.00
- ☐ Ⓑ \$5.00
- ☐ Ⓒ \$6.00
- ☐ Ⓓ \$7.00

Lunch Special	
Soup	\$1.85
Sandwich	\$3.10
Juice	\$0.95



Sample C

Wayne had 6 math problems to complete. He started working on them at 4:00 P.M. He completed the first problem at 4:04 P.M., and the second at 4:08 P.M. Wayne completed each problem in the same amount of time without taking any rest breaks. How many minutes did it take Wayne to complete all 6 math problems?

Answer: _____ minutes

Write a rule Wayne can use to determine how many minutes it would take him to complete any number of math problems.

Rule: _____



1 Which number is a multiple of 6 ?

- ☐ A 16
- ☐ B 28
- ☐ C 42
- ☐ D 56

2 What number should be placed in the to make the number sentence true?

$$4 \times 3 \times 2 = \text{ } \times 2 \times 4$$

- ☐ A 1
- ☐ B 2
- ☐ C 3
- ☐ D 4

3 The recipe for Tommy's famous chocolate chip cookies calls for $\frac{3}{4}$ cup of chocolate chips. Tommy wants to triple the recipe. What is $\frac{3}{4} + \frac{3}{4} + \frac{3}{4}$?

- ☐ A $1\frac{1}{2}$
- ☐ B 2
- ☐ C $2\frac{1}{4}$
- ☐ D 3

4 Mike takes ten coins out of his pocket. They add up to exactly \$0.49. If the coins consist of pennies, nickels, and dimes, how many of each coin does Mike have?



Answer: _____ pennies



Answer: _____ nickels



Answer: _____ dimes



5 Mr. Brower wants to buy enough string to hang his students' art projects. Mr. Brower wants to hang 30 art projects. He will use 6 inches of string for each project. What is the *least* amount of string, in feet, he should buy?

- ☐ A 5 feet
- ☐ B 15 feet
- ☐ C 60 feet
- ☐ D 180 feet

6 What is the place value position of the 2 in the number 726,309.54?

- ☐ A thousands
- ☐ B ten thousands
- ☐ C hundred thousands
- ☐ D millions

7 Julie used her ruler to measure the pencil below. She used 2 different units of measurement.



Which of these could be the 2 different units of measurement that Julie used?

- ☐ A 120 millimeters and 12 centimeters
- ☐ B 12 millimeters and 120 centimeters
- ☐ C 120 centimeters and 12 meters
- ☐ D 12 centimeters and 120 meters

NOTE: The length measurements may not be exact because of differences in printers.

- 8** What is the next number in the pattern below?

12, 19, 26, 33, . . .

- ☐ A 26
☐ B 33
☐ C 39
☐ D 40

- 9** Mary has some trading cards. Julie has 3 times as many trading cards as Mary. They have 36 trading cards in all. Which of these equations represents their trading card collection?

- ☐ A $3x = 36$
☐ B $x + 3 = 36$
☐ C $x + 3x = 36$
☐ D $3x + 36 = x$

- 10** Alan wants to bring 12 cupcakes to his class party. He can buy cupcakes at the bakeries listed below:

- Sunrise Bakery sells 3 cupcakes for \$1.80
- Quality Bakery sells 4 cupcakes for \$2.20
- Tasty Bakery sells 6 cupcakes for \$3.00

To spend the least amount of money, Alan needs to know how much one cupcake costs at **each** bakery. What is the cost per cupcake at **each** bakery? Show your work and write your answers in the box below.

Cost per cupcake at Sunrise Bakery: \$ _____

Cost per cupcake at Quality Bakery: \$ _____

Cost per cupcake at Tasty Bakery: \$ _____



- 11** Dan went to a craft fair where he spent a total of \$16.00. He spent \$6.00 on admission and went to 8 tables. He spent the same amount of money (m) at each table. The following number sentence can be used to find how much money he spent at each table.













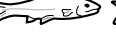

$$16 = 6 + 8m$$

How much money did Dan spend at each table?


- ☐ A \$0.50
- ☐ B \$0.80
- ☐ C \$1.25
- ☐ D \$2.00

- 12** Ms. Nonell's sixth-grade class is going on a fishing trip. The pictograph below shows the number of fish caught each day.

FISH CAUGHT ON FISHING TRIP

Day	Number of Fish
Monday	 
Tuesday	  
Wednesday	    
Thursday	   

KEY

 = 5 fish

According to the information in the pictograph, how many fish were caught on Thursday?

- ☐ A 3
- ☐ B 4
- ☐ C 15
- ☐ D 20

13 Lori entered a 20-kilometer race. A kilometer is about $\frac{5}{8}$ of a mile. About how many miles long is the race?

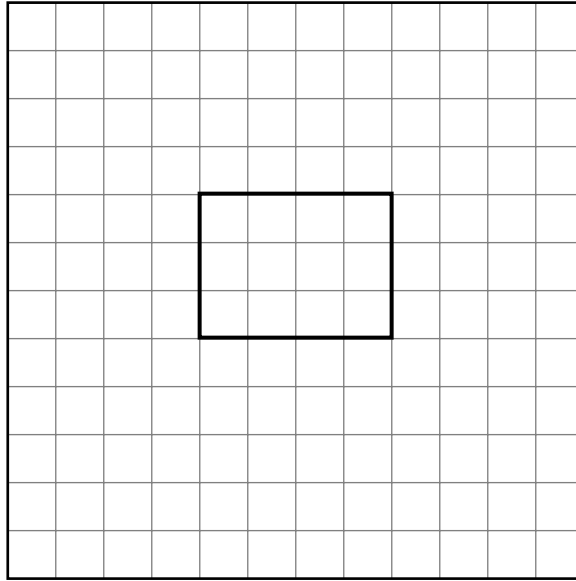
- ☐ Ⓐ 8 miles
- ☐ Ⓑ $12\frac{1}{2}$ miles
- ☐ Ⓒ $20\frac{5}{8}$ miles
- ☐ Ⓓ 32 miles

14 A sixth-grade class is growing plants for their science projects. Each student spent \$1.00 for a package of seeds and \$2.50 for a container to plant the seeds in. There are 30 students in the class. How much money did the sixth-grade class spend on seeds and containers in all?

- ☐ Ⓐ \$3.50
- ☐ Ⓑ \$105.00
- ☐ Ⓒ \$165.00
- ☐ Ⓓ \$255.00

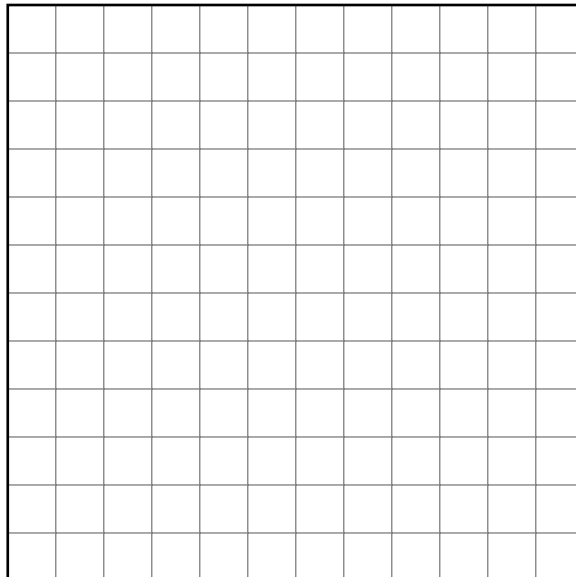


- 15** What is the area, in square units, of the rectangle drawn on the grid below?



Answer: _____ square units

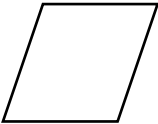
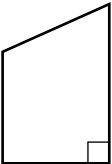
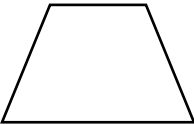
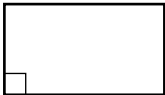
On the grid below, draw a rectangle that has an area of 10 square units.



16 Rachel has to draw two rectangles that are similar to each other. She drew the first rectangle 5 centimeters wide and 6 centimeters long. She drew the second rectangle 10 centimeters wide. How long should she draw the length of the second rectangle?

- ☐ A 11 centimeters
- ☐ B 12 centimeters
- ☐ C 15 centimeters
- ☐ D 20 centimeters

17 Which of the figures below is a quadrilateral with 2 pairs of parallel sides and no right angles?

- ☐ A 
- ☐ B 
- ☐ C 
- ☐ D 

18 The table below shows the scores 14 students received on a math test.

MATH SCORES

Score	Tally
100	
95	
90	
85	
80	

What is the median score?

- ☐ A 85
- ☐ B 90
- ☐ C 95
- ☐ D 100

KEY FOR MULTIPLE-CHOICE ITEMS

Sample A: **C**

Sample B: **C**

1. **C**
2. **C**
3. **C**
5. **B**
6. **B**
7. **A**
8. **D**
9. **C**
11. **C**
12. **D**
13. **B**
14. **B**
16. **B**
17. **A**
18. **C**

CONSTRUCTED-RESPONSE QUESTIONS:

Sample C

Complete and Correct Response

- 24 minutes

AND

- 4 multiplied by the number of math problems

2 Score Points

- 1 point for correct process
- 1 point for correct answer

Item 4

Complete and Correct Response

- 4 pennies
- 3 nickels
- 3 dimes

2 Score Points

- 2 points for correct answer
- 1 point for any combination of coins that equals \$0.49, but does not use exactly 10 coins

Item 10

Complete and Correct Response

- Sunrise Bakery $\$1.80 \div 3$
- Quality Bakery $\$2.20 \div 4$
- Tasty Bakery $\$3.00 \div 6$

AND

- Sunrise Bakery \$0.60
- Quality Bakery \$0.55
- Tasty Bakery \$0.50

4 Score Points

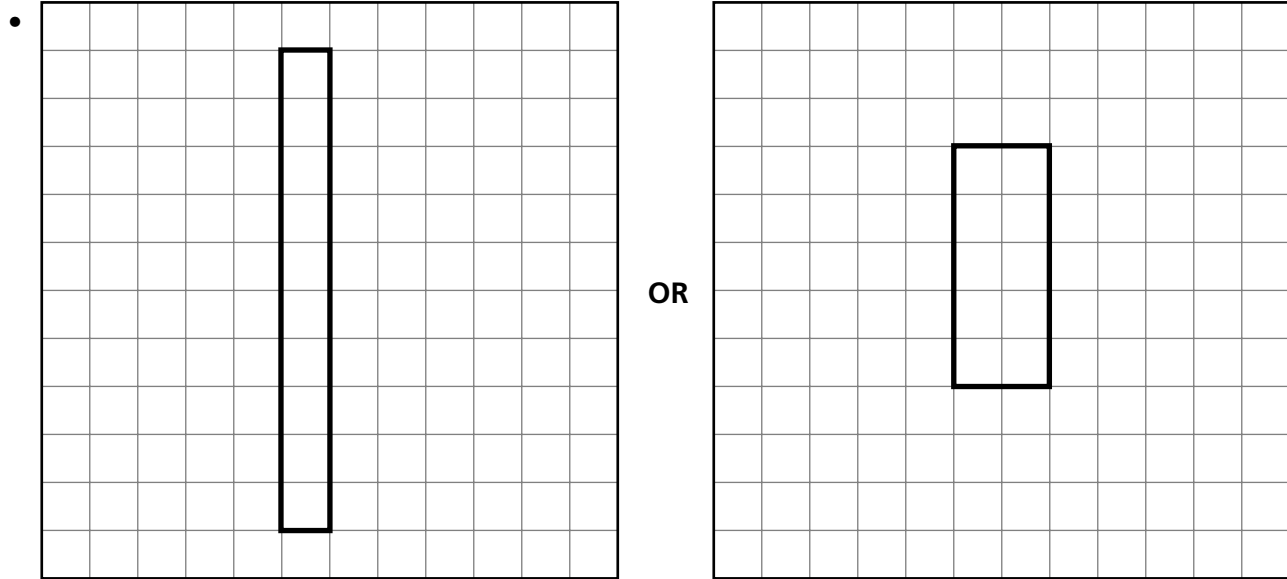
- 1 point for correct process of finding cost per cupcake at Sunrise Bakery, Quality Bakery, and Tasty Bakery
- 1 point for correct cost per cupcake at Sunrise Bakery
- 1 point for correct cost per cupcake at Quality Bakery
- 1 point for correct cost per cupcake at Tasty Bakery

Item 15

Complete and Correct Response

- 12 square units

AND



2 Score Points

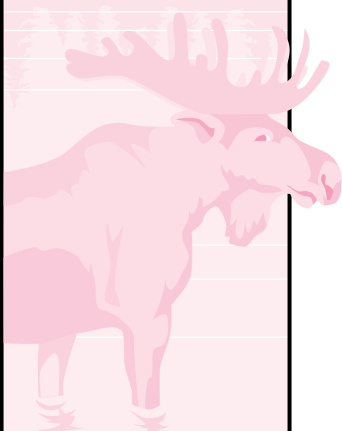
- 1 point for correct area of rectangle
- 1 point for correct drawing of rectangle with an area of 10 square units



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Monterey, California 93940-5703



Alaska Department
of Education &
Early Development




Alaska

Comprehensive System of Student Assessment

Benchmark 2
Mathematics Practice Test